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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/907,250 | 07/17/2001 | Yung Yi Chang | B-4248 618947-0 | 5651 |

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07/03/2003

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| EXAMINER |
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NGUYEN, FRANCIS N

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| ART UNIT | PAPER NUMBER |
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2674

DATE MAILED: 07/03/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/907,250

Applicant(s)

CHANG, YUNG YI

Examiner

FRANCIS NGUYEN

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-13 is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☒ Claim(s) 4-8 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Response To Preliminary Amendment

1. The preliminary Amendment filed on 7/17/2001 is entered.

Specification

2. The disclosure is objected to because of the following informalities: incorrect word "witch"(page 4, line23).

Appropriate correction is required.

Claim Objections

3. Claims 5, 9, 11-13 are objected to because of the following informalities: second paragraph of claim 5 should be another claim(page 8), improper phrases "the first switch" (claim 9, page 8, lines 6-7, claim 12, page 9, line 3), "the second switch" (claim 9, page 8, line 12, claim 11, line 2, claim 12, line 2, claim 13, line 3). Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admission (Japanese Laid Open Application 11-281957).

As to claim 1, Applicant's admission discloses a device for eliminating flickering of thin-film-transistor liquid-crystal-display (TFT-LCD), the device comprises

a first switch, configured between a power supply and an output end of the device and the other end connected to the ground (SW1 in figure 2-prior art),

a discharge circuit , with one end connected between the first switch and the output end connected between the first switch and the output end of the device and the other end connected to the ground (R and C shown in figure 2-prior art),

a second switch , for controlling whether the discharge circuit is grounded (SW2 shown in figure 2-prior art);

a trigger signal source (Vtc shown in figure 2-prior art), for controlling the switches; wherein when the first switch is on and the second switch is off, the output end of the device is connected to the power supply and the second switch is on, the discharged circuit is grounded and discharged (figure 2-prior art).

However, Applicant's admission fails to expressly teach a means for delaying opening of the second switch . Note that Applicant's admission discloses transistors are well known in the art to be used for switching function (page 3, lines 1-2) and slashes on gate pulse reduce recharging time of thin-film-transistors (page 3, lines 3-6). It would have been obvious to a person of skilled in the art at the time of the invention to utilize the apparatus disclosed by Applicant's admission then vary the amount of slash on gate pulse in order to obtain the apparatus

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Applicant's admission modified because it will result in increasing recharge period. The variable amount of slash corresponds to the claimed means for delaying opening the second switch.

As to claim 2, the device in claim 1, wherein the first and the second switches are transistors (Applicant's admission, page 3, figure 2-prior art)

As to claim 3, the device in claim 1, wherein the discharge circuit comprises a resistor (R) and a capacitor (C)(resistor and capacitor shown in figure 2-prior art).

Allowable Subject Matter

6. Claims 9-13 are allowed. Note claim objections above.

7. Claims 4- 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

As to claim 4, none of prior art discloses a device for eliminating flickering of thin-film-transistor liquid-crystal-display (TFT-LCD) wherein means for delaying opening of the second switch is a component or circuit with negative temperature constant.

As to claim 5, none of prior art discloses a device for eliminating flickering of thin-film-transistor liquid-crystal-display (TFT-LCD), wherein the means for delaying opening of the second switch is disposed in the discharged circuit.

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As to claim 6, none of prior art discloses a device for eliminating flickering of thin-film-transistor liquid-crystal-display (TFT-LCD), wherein the means for delaying opening of the second switch is configured between the trigger signal source and the second switch.

As to claim 7, none of prior art discloses a device for eliminating flickering of thin-film-transistor liquid-crystal-display (TFT-LCD), wherein the means for delaying opening of the second switch is a thermistor.

As to claim 8, none of prior art discloses means for delaying opening of the second switch has higher resistance at low temperature and lower resistance at high temperature.

As to claims 9-13, none of prior art discloses a thermistor for delaying opening of the second switch at lower temperatures.

CONCLUSION

8. The prior art made of record but not relied upon is pertinent to Applicant's disclosure

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| US Patent | Takahashi et al. | 6,005,541 |
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| US Patent | Uchida et al. | 6,166,726 |
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| US Patent | Suzuki et al. | 5,606,340 |
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| US Patent | Kimura et al. | 5,253,091 |
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Reference Takahashi et al. is made of record as it discloses a liquid crystal display discharge circuit.

Reference Uchida et al. is made of record as it discloses a discharge circuit for liquid crystal display.

Reference Suzuki et al. is made of record as it discloses a thin film transistor protection circuit.

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Reference Kimura et al. is made of record as it discloses a liquid crystal display having reduced flicker.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **FRANCIS N NGUYEN** whose telephone number is **703 308-8858**. The examiner can normally be reached during hours 8:00 AM- 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **RICHARD A HJERPE** can be reached at 703 305-4709.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service whose telephone number is (703) 306-0377.



June 27th, 2003

FRANCIS N NGUYEN
Examiner
Art Unit 2674